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Case Report

Infectious Keratitis by *Shewanella algae*

Abuin Liliana[1]*, Defeo Maria Cecilia[2], Huarte Leticia[3], Leonardis Lucio[4], Ferella Elsa[5] and Mascazzini Virginia[6]

[1]*Head of Corneal Transplantation, Dr R. Rossi Hospital, The Silver, Buenos Aires, Argentina*

[2]*Head of Room of the Ophthalmology, Service Hospital Dr R. Rossi, The Silver, Buenos Aires, Argentina*

[3]*Former Head of Ophthalmology, Service Hospital Dr R Rossi, La Plata Buenos Aires, Argentina*

[4]*Former Resident of Ophthalmology, Hospital Dr R Rossi, The Silver, Good Aires, Argentina*

[5]*Doctor of the Ophthalmology, Service Hospital Dr R Rossi, La Plata, Buenos Aires, Argentina*

[6]*Physician of the Ophthalmology, Service Hospital Dr R Rossi, The Silver, Buenos Aires, Argentina*

***Corresponding Author:** Abuin Liliana, Head of Corneal Transplantation, Dr R. Rossi Hospital, The Silver, Buenos Aires, Argentina.

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Abstract

Objective: To present a case of *Shewanella algae* Infectious Keratitis in a diabetic patient with a history of cataract surgery several years postoperatively.

Purpose: To present a case of infectious keratitis by *Shewanella algae* in a diabetic patient with a history of cataract surgery with a postoperative of several years.

Case Report: 76-year-old patient with corneal abscess and positive cultivation for *Shewanella algae.* with a history of two prevalent diseases in the alteration of the eye surface such as Diabetes and Bullosa keratopathy after cataract surgery with intraocular lens implantation. Before the clinical ophthalmological picture, prior culture, it required treatment with fortified eye drops of Vancomycin (dose 5 mg/ml), Ceftazidima (dose 5 mg/ml) and Amikacin (dose 5 mg/ml) prepared in our Hospital, referring with this last.

Methods: A 76 year-old patient with a corneal abscess and a *Shewanella algae* positive culture with a history of two thriving illnesses with ocular surface alteration such as diabetes and pseudophakic bullous keratopathy following the implanted intraocular lens in the cataract surgery. Having this clinical- ophthalmology case in mind, before the culture, treatment with a preparation of fortified eye drops of Vancomycin (doses 5 mg/ml), ceftazidime (doses 5 mg/ml) and amikacin (doses 5 mg/ml) was required and responded to this treatment.

Conclusion: Uncommon case of opportunistic germ abscess, *Shewanella algae.* In diabetic patients with pseudofaquica bullosa keratopathy. Infrequent case of abscess by the opportunistic germ, Shewanella alga in a diabetic patient with pseudophakic bullous keratopathy.

Keywords: Abscess; Infrequent Germ; *Shewanella algae*; Diabetes; Bullosa Pseudophakic Keratopathy

Introduction

Shewanella a*lgae* is a rare opportunistic pathogen. It's a bacterium Gram (-), reported according to the literature in cases of osteomyelitis, pneumonia, rupture of aortic aneurysm, brain abscesses and multiple systemic failures.

The bibliographical research yielded only one single reference to this germ, concerning a previous surgery of Lasik after 6 years postoperative.

Therefore, the objective of this work is to describe a case of opportunistic infection with *Shewanella algae* in one eye with a history of Pseudophakia Tubulopathy in a diabetic patient.

Case Report

76-year-old patient, diabetic and hypertensive, not clinically controlled, who consults the Corneal Section, Ophthalmology Service of Dr. R. Rossi Hospital. of the city of La Plata, province of Buenos Aires since January 2011.

Ophthalmological history: cataract surgery in right eye (OD) in 2010 performed in another centro and with bullosa pseudophakic keratopathy.

It is repeatedly in our service for pain and red eye. It is noted that no cornea abscess is cultivated, with positive results for common germs, in two of them for *Serratia marcescens* and *Moraxella lacunata.*

In March 2015, consult for pain and red eye in OD. To eye exam presents AV in right eye(OD) vision counts fingers (VCD) and left eye (OI) 6/10. Biomicroscopy (BMC) is observed to corneal abscess of 3 x 5 mm with peri lesional corneal edema, hypopyon grade II/III. In the 72 hours that he develops endothelial plaque and hypopyon mixed with blood. For the characteristics of the table, in addition to the fortified eye drops of Vancomycin (dose 5 mg/ml) and Ceftriaxone (Dose 5 mg/ml), Amphotericin B (dose 5 mg/ml) colirio was added: low or suspected keratitis mycotic. All eye drops were prepared in our Hospital under the corresponding asepsis conditions.

At 72 hours, the evolution of the frame is favorable, it is the result of the crop: "bronze colony in chocolate agar, grows in broth with and without Sodium Chloride (ClNa), in triple sugar agar, non-fermenting germ that produces Hydrogen Sulfide (SH2), colony in plaque dNAsa positive test for *Shewanella algae*", corroborated by the Malbrán Institute. Sensible to Ciprofloxacin, Amikacin and Trimetoprim - Sulfamethoxazole.

The treatment is changed to fortified amikacin col irios (Dose 5 mg/Ml), suspending those used above mind. El box refers about at two weeks, leaving central leukocoria. It is currently on the waiting list for corneal transplant.

Discussion and Conclusion

Shewanella algae is a rare opportunistic pathogen. It is considered a Gram (-) bacterium, reported according to the literature in cases of osteomyelitis, pneumonia, rupture of aortic aneurysm, brain abscesses and multiple systemic failures.

We present this case as a rare and uncommon complication, resulting from a cornea abscess, in a patient with a history of cataract surgery in years prior to the picture; with repeated episodes of red eye, doloroso and ulcers. At the last consultation he presented grade IV corneal abscess and positive cultures for *Shewanella algae,* sensitive by antibiogram to Amikacin with slow and favorable response to treatment.

It is worth highlighting the importance of the case as a diabetic patient and with Keratopathy Bullosa Pseudophakia.

Diabetes (DBT) is a disease with an impact on the eye surface, being able to produce corneal epithelial changes over time, giving decreased sensitivity and the production of tears, which would thus lead to alter the integrity of it. It has been observed in laboratory studies [2] that these alterations are reflected by the presence of glucose, sorbitol and fructose in the corneal epithelium.

Pseudophakic Bullous Keratopathy [3] causes not only decreased vision and pain from rupture of epithelial bullas, but also predisposes to the ingress of pathogenic germs.

It is noteworthy that after our bibliographic research, we have investigated the cause and detected the presence of an unusual germ; of which there is only one reference to this germ in ophthalmology, regarding a previous surgery of Lasik after 6 years of postoperative [1,4,5].

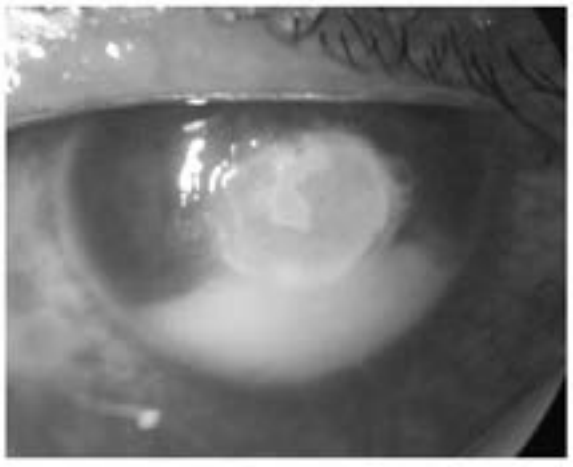

Figure 1

Bibliography

1. Srinivas J., *et al*. "Skin and Soft Tissue Infections due to Shewanella algae- An Emerging Pathogen". *Journal of Clinical and Diagnostic Research: JCDR* 9.2 (2015): DC16-DC20.

2. Richard O., *et al*. "Diabetic Keratopathy". TR. AM. OPHTH. Soc. LXXIX, (1981).

3. Pricopie Stefan., *et al*. Ophthalmology Department, Bucharest Emergency University Hospital, Bucharest, Romania. Anatomy Department, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. "Pseudophakic bullous keratopathy". *Romanian Journal of Ophthalmology* 61.2 (2017): 90-94.

4. Hee-Jung S., *et al*. "Shewanella putrefaciens Keratitis in the Lamellar Bed 6 years after Lasik". *Journal of Refractive* Surgery 23 (2007): 830-832.

5. Gillian D., *et al*. "Alternatives to corneal transplantation for the management of Bullous Keratopathy". *Ophthalmology* 25 (2001): 347-352.